Illegible handwriting in medical records

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SUMMARY

In clinical records many items are handwritten and difficult to read. We examined clinical histories in a representative sample of case notes from a Spanish general hospital. Two independent observers assigned legibility scores, and a third adjudicated in case of disagreement. Defects of legibility such that the whole was unclear were present in 18 (15%) of 117 reports, and were particularly frequent in records from surgical departments.

Through poor handwriting, much information in medical records is inaccessible to auditors, to researchers, and to other clinicians involved in the patient's care. If clinicians cannot be persuaded to write legibly, the solution must be an accelerated switch to computer-based systems.

INTRODUCTION

Despite the computer revolution, much information in clinical records continues to be handwritten. The originator may understand what has been written, but difficulties can arise when other parties are involved. Only a few studies, however, have been reported on the legibility of medical documents and these largely about prescriptions[1–7]. We therefore decided to examine the legibility of case histories written on admission of patients to our hospital.

METHODS

The hospital, located in south-west Spain, has 600 beds. We obtained a representative sample by examining, on a single day, case notes from patients whose rooms had even numbers. Certain specialties—intensive care, haematology, gynaecology, paediatrics—had their own record systems and were excluded. The 'clinical history' was taken to be any document written by a clinician that included the patient's name, age, medical condition, and reason for admission. Two medical residents, recently arrived at the hospital and not involved in the admissions or recording of case notes, evaluated the legibility of the document on a score of 1–4. This classification (Box 1) has been used by others[5]. They went through a training process in order to reach a kappa concordance coefficient of 0.85. A third reviewer adjudicated in case of disagreement.

Box 1 **Legibility scoring**

1 Illegible (most or all words impossible to identify)

2 Most words illegible; meaning of the whole unclear

3 Some words illegible, but report can be understood by a clinician

4 Legible (all words clear)

RESULTS

117 case notes were examined and 18 (15%) were scored 1 or 2—i.e. they were so illegible that the meaning was unclear. Table 1, giving results for individual specialties, indicates that surgical departments performed worse than medical departments.

DISCUSSION

A weakness of this study was that it might have been skewed by the poor handwriting of just a few clinicians who were responsible for many admissions. Also, we did not distinguish between cold admissions, in which the notes might simply consist of a shorthand reminder of the outpatient consultation, and acute admissions, where a full and comprehensible history is more important. This might partly explain why medical departments scored better in this respect than surgical departments.

If 15% of case histories are illegible, does this matter? In principle, it is a source of avoidable error—for audit, research, and clinical communication[8–10]. The remedy lies

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Table 1 **Scores for individual departments**

		Score			
Section	**Patients (n)**	**1**	**2**	**3**	**4**
Medical					
General internal medicine	33	0	1	3	29
Cardiology	7				7
Gastroenterology	5				5
Respiratory diseases	8			2	6
Neurology	8		1	1	6
Oncology	6				6
Subtotal	67	0 (0%)	2 (3%)	6 (9%)	59 (88%)
Surgical					
Orthopaedic surgery	17	1	0	5	11
General surgery	15	5	3	2	5
Otolaryngology	4	2	1	0	1
Vascular surgery	8	0	0	0	8
Ophthalmology	3	0	2	1	0
Urology	3	0	2	0	1
Subtotal	50	8 (16%)	8 (16%)	8 (16%)	26 (52%)
Total	117	8 (7%)	10 (9%)	14 (12%)	81 (70%)

either in a more conscientious approach to record-keeping, with an eye to the needs of other readers, or an accelerated move towards computer-based systems[11]. In our view, it is time to say goodbye to manuscript in medical notes, whether legible or not.

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